REMARKS

The Office Action of March 3, 2006 has been carefully considered. Reconsideration of this application, in light of the following arguments in traversal of the rejections, is respectfully requested.

Applicants respectfully submit that the finality of the present Office Action is premature. As noted by Applicants in the prior response, the rejections fail to set forth the description or figures relied upon in the cited patents for teaching the alleged limitations. Contrary to the requirements of MPEP 707.07(d) the Examiner appears to have grouped a plurality of claims together in a common rejection, and while referencing some limitations of some dependent claims, fails to set forth the portions of the cited patents relied upon as the basis for rejection of all of the dependent claims included in the rejection. In preparing this response Applicants have addressed the failure of the cited patents to teach various elements set forth in several rejected dependent claims. Applicants previously noted this deficiency and now respectfully request that the Examiner withdraw the finality of the present Office Action and indicate the allowability of the dependent claims, or to set forth the basis for the rejection in an adequate fashion so as to permit Applicants to respond thereto.

Applicants acknowledge the withdrawal of the prior rejection under 35 USC §112, second paragraph.

Remaining daims 1-5 and 7–31 are presently rejected under 35 USC §103(a) as being unpatentable over Contreras in view of Burris '993. Claims 1-5 and 7–31 also remain rejected under 35 USC §103(a) as being unpatentable over Engelhard et al. in view of Burris '993.

Considering the rejections set forth under 35 USC §103(a), the rejections are respectfully traversed as more particularly set forth in the detailed arguments presented below.

To establish *prima facie* obviousness, the Examiner is required to: (a) show some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (b) establish a reasonable expectation of success; and

(c) establish that the prior art references, when combined, teach or suggest all the claim limitations. Moreover, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claims 1-5 and 7-31 were rejected under 35 USC §103(a) as being unpatentable over Contreras in view of Burris '993. Contreras discloses keeping a storage tank of ozone with the water (e.g., Abstract) and further discloses continuously ozonating and circulating the ozonated water (col. 2, lines 18-20; col. 3, line 57 – col.4, line 8). However, Contreras fails to teach or suggest any vent for the ozone, let alone the recited "reducing system that prevents ozone in the separated gas from escaping into the atmosphere by passing the gas through an ozone reducing material before venting," as recited in rejected claim 1. Contreras does teach at column 4, lines 5-15 that "actively ozonated water is to flow from the tap," and that excess ozone is handled by "flexible tube 26 connected … and fed into the storage tank 2 so that the hose is positioned near the bottom of the lid 9 to capture and reuse any excess ozone, thus leaving no waste." Such a statement teaches that the excess ozone is discharged with the treated water from the tap, and appears to be contrary to, and teaches away from, a vent and a reducing system as presently claimed.

Furthermore, the phrase "actively ozonated" is understood to mean that ozonation is still occurring and for that to happen the water would need to be in contact with an ozone containing gas. Based on this information Applicants urge that one skilled in the art could only conclude that Contreras teaches that the excess gas with ozone is output with the water. Accordingly, Contreras teaches away from the recited limitations (e.g., claim 1), requiring "a separation system that separates undissolved gas from the ozonated liquid prior to circulating the ozonated liquid through the circulation passageway; a reducing system that prevents ozone in the separated gas from escaping into the atmosphere by passing the gas through an ozone reducing material before venting" (emphasis added).

The rejection also continues to rely upon the teachings of Burris '993, when it is clear that Burris '993 is a batch disinfection system. Burris '993 is directed to equipment for purifying batches of liquid with ozone - when the liquid is allowed the time for purification to take place. Thus, Burris '993 does not appear to disclose the output of

a disinfecting liquid as does Contreras. Furthermore Burris '993 indicates that it is undesirable to vent ozone directly to the atmosphere without changing it to oxygen (col. 3, lines 24-27). Burris '993 makes it clear that liquid cannot enter the ozone reducer 23 (col. 3, lines 44-56).

In response to Applicant's questioning of the motivation to combine and modify the teachings of the referenced patents, the Examiner now states that the motivation "is to protect users of the system in the case of an emergency or maintenance shutdown of the system." (Final Office Action, p. 5) Applicants are once again unable to identify where the Examiner finds such motivation in the references of record, and the Examiner fails to indicate where such a suggestion is found so as to be available to one of ordinary skill in the art. At best Applicants understand that Contreras suggests a removable lid 9 for maintenance, yet makes no mention of the need to vent or reduce ozone. It is, therefore, apparent that the Examiner is relying upon the claim limitations of the present application as the basis for urging the proposed combination. *Prima facie* obviousness may not be established by relying on the teachings of Applicants' claims.

Applicants also maintain that the standard for obviousness is that "the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art," not "well within the purview of one of ordinary skill in the art." Moreover, the alleged reason for the combination further admits to Contreras' contrary teachings – indeed it appears to "allow for … natural dissipation of the off-gas as required by return of the off-gas to the reservoir." Why would one of skill in the art be motivated to provide the reduction and venting of the Burris '993 batch system if Contreras is indeed returning gas to the reservoir and allowing for its natural dissipation? The Examiner appears to respond that Contreras "clearly provides" unions 13 and 18 "for that exact occurrence" (referring to emergency shut down). There is absolutely no support for an emergency shutdown or for such an "interpretation" nor does it make any practical sense. Absent a suggestion, it again appears that the Examiner has based the combination on an unsupported, even fictional, application for the system that is not found in the references relied upon for the rejection. In view of the failure of the rejection to set forth adequate grounds to support the proposed combination, *prima facie* obviousness has not been established to which Applicants must or even can respond. Accordingly, Applicants

respectfully submit that claims 1-5 and 7-31 are in condition for allowance and respectfully request an indication thereof.

Considering, *in arguendo*, the combination of Contreras in view of Burris '993, Applicants contend that, at best, the arguable combination fails to teach a circulation system that circulates liquid containing dissolved ozone and a separation system that separates undissolved gas from the ozonated liquid prior to circulating the ozonated liquid through the circulation passageway – neither of the patents relied upon expressly indicate such a feature. Accordingly, claim 1 is patentably distinguishable over the arguable combination of Contreras in view of Burris '993.

Applicants respectfully urge that the Examiner has mischaracterized the teachings of Burris '993 as the basis for rejection of claim 8, wherein the Examiner urges that Burris '993 teaches "equivalence" between a "static diffuser and venture means." Applicants are unable to find the terms "static diffuser" or "venture means" in Burris '993, or even the present claims. Applicants urge that the teaching of Burris '993 suggests that a static mixer may increase mixing action of a pump, not be used as a substitute. In the event the rejection of claims 7 – 9 is maintained, Applicants respectfully request that the Examiner identify where the claimed limitations are set forth in the patents relied upon.

Relative to the rejection of claim 13, in addition to being dependent from claim 12 (barrier prevents liquid from entering ozone reducing material), for which no basis for rejection is expressly set forth, the claim further recites "a porous hydrophobic barrier." In the rejection, the Examiner urges that it would have been obvious to substitute a porous hydrophobic barrier for a check valve "because it would provide a more simply [sic] means of protecting the generator…." Here again, the rejection sets forth no citation to where such a suggestion is found in the references or the prior art.

Applicants further urge that Contreras teaching of a venturi system as the means for introducing ozone into the liquid would not permit the substitution of a hydrophobic material for the check valve. More specifically, claims 12 and 13 deal with protecting the ozone reducing means, and not with protecting the ozone generator. Contreras simply does not have an ozone reducing material to protect. If a hydrophobic material were to be used in place of venturi/check valve 16 of Contreras, as alleged in the rejection, then the incoming side of the barrier would soon become clogged

with water droplets received from tubing 26 and would then stop all ozone containing gas from mixing with the liquid flowing through venturi 16. The water droplets that occur when bubbles burst as they reach the surface was the motivation to "develop" a hydrophobic barrier method for protection of the ozone reducing material as used and claimed in the present invention.

Applicants acknowledge that the Examiner refers to a “separation means” (Final Office Action, p. 5) and urges that line 26 (“a flexible tube 26 … to capture and reuse any excess ozone, thus leaving no waste”; col. 4, lines 12-15) is apparently a barrier, or a hydrophobic barrier. If this is the interpretation offered by the Examiner, Applicants respectfully contend that the rejection is entirely without merit and claim 13 is allowable. If the Examiner intended the alleged “separation means” as the basis for another rejection, Applicants once again request that the Examiner set forth the claim to which such statements pertain, as well as the location in the cited patents that the Examiner finds such teachings.

Absent such an indication, Applicants urge that *prima facie* obviousness has not been established and respectfully request withdrawal of this rejection of claim 13. Applicants once again urge that in view of the incomplete rejections, should such rejections be maintained, Applicants must be permitted an opportunity to further amend or respond to the rejections only when they have been set forth with sufficient clarity as to permit a response. Applicants therefore respectfully submit that the rejections set forth in the Office Action are incomplete, particularly relative to dependent claims 2 - 5, 7 - 12 and 14 - 31, the limitations of many of which have not been specifically associated with disclosure or figures found in either Contreras or Burris ‘993.

As to claim 14, Applicants urge that the rejection fails to set forth any teaching of the use of the liquid source providing pressure to circulate and output the ozonated liquid. Furthermore, recently amended claim 16 recites a waste line, where liquid that is not output for use from the pressurized liquid circulation passageway is directed to the waste line. No such teaching has been identified by the Examiner in the teachings of Contreras or Burris ‘993. Claim 17 further adds the limitation that the ozonated liquid rinses a cuspidor before entering the waste line of claim 16. Here again, the limitations of these dependent claims have not been set forth in the

rejections and Applicants respectfully assert the finality of the present Office Action is premature.

Relative to claim 19, this claim further recites an ozone sensor connected to an alarm. Once again, Applicants do not believe the rejection has identified where such limitations are taught by either Contreras or Burris '993. Accordingly, Applicants respectfully maintain that the rejection of claim 19 over Contreras in view of Burris '993 is incomplete and that the finality of the Office Action is also premature.

Considering claim 23, again Applicants respectfully maintain that the rejection fails to set forth any indicated as to where a teaching of the use of operatory unit dried air as the source of oxygen for the ozone generator is found in the patents relied upon for the rejection. Absent such teaching *prima facie* obviousness has not been established, and claim 23 is patentably distinguishable over the arguable combination. In the vent the rejection is maintained, Applicants respectfully request that a subsequent action indicate the allowability of claim 23 or set forth with particularity the teachings relied upon as the basis for the rejection.

With respect to claim 25, although the rejection broadly suggests that "control means are further provided to control activation, operation and delivery of the water" (Final Office Action, p. 2), no supporting disclosure has been identified in the rejection. Moreover, a control system responsive to a lack of supply water is not believed to be taught by either patent relied upon for the rejection. Hence, the rejection of claim 25 is, at best, incomplete and Applicants respectfully request a subsequent indication of the allowability of claim 25.

Claims 27 – 29 include further limitations with respect to the device, and specifically recite valved dispensing means and response to air pressure to a hand piece. Once again, no such teaching has been identified in the patents relied upon as the basis for the rejection. Absent such teaching *prima facie* obviousness has not been established and Applicants respectfully urge that claims 27 – 29 are patentably distinguishable over the arguable combination of Contreras in view of Burris '993.

Claims 1 – 31 also remain rejected under 35 USC §103(a) as being unpatentable over Engelhard et al. (5,942,125) in view of Burris '993. Applicants note that the Examiner, in the "Response to Arguments" section of the Final Office Action appears to now further rely on teachings from Contreras for a suggestion that a UV ozone

generator may be substituted for a corona generator. Applicants respectfully submit that the addition of the teachings of Contreras has not been set forth in the rejection. In the event that the teachings of Contreras form a part of the basis for the rejection, Applicants request that a new rejection expressly indicate the addition of Contreras and that Applicants be provided an opportunity to respond thereto. Otherwise, Applicants again urge that the finality of the present Office Action is premature.

Considering the rejection over Engelhard et al. (5,942,125) in view of Burris '993, Engelhard is directed to an ozone generator that provides an outflow of ozone enriched air introduced to a water source through a sparger. The ozonated water is conveyed through water lines to each of the various handpieces or implements used by a dentist during the normal course of providing dental services. The ozone introduced into the water will destroy any microbial pathogens in the water and render it essentially microbe free.

Engelhard, like Contreras, also relies on the circulation of ozonated water having undissolved ozone gas therein. Moreover, the statement that the water kills living organisms and biofilms confirms this. As noted above, such a teaching is contrary to Burris '993 (no circulation of ozone containing gas), and Applicants respectfully urge that the patents are not properly combined.

Applicants continue to be puzzled by the Examiner's urging the substitution of the Burris '993 teaching of a corona discharge generator for the UV generator of Engelhard. It appears that the Examiner is acknowledging that Engelhard fails to teach the recited limitation of "an ozone generator using a corona discharge." Then, presumably to bolster the rejection, the Examiner urges that a corona discharge generator is functionally equivalent to a UV generator. Applicants respectfully contend that the Examiner has provided no evidence to support such a position. Moreover, the concentration of ozone produced by a UV generator is roughly ten percent that produced by corona discharge (see e.g., http://www.ozoneapplications.com/info/cd_vs_uv.htm). Applicants further submit the attached Exhibit as evidence that one skilled in the art would not have been motivated to substitute the UV generator taught by Engelhard with the corona discharge generator of Burris '993; the change in concentrations of ozone produced would require significant alterations to the designs of such systems. Applicants refer the Examiner to pages II-18 and II-19 of attached Exhibit, where it is clear that there

are several distinctions between UV generation and corona generation of ozone (e.g., input requirements, capacity, power requirements). Absent a specific teaching to suggest the proposed substitution, Applicants respectfully urge that the present claims are again being used as the "recipe" from which elements of unrelated systems are urged for combination and modification. Accordingly, Applicants respectfully traverse the rejection.

Applicants further submit that the rejections set forth in the Office Action are again incomplete relative to dependent claims 2 - 5, 7 - 12 and 14 - 31, as the limitations thereof have not been indicated as being found in either Engelhard or Burris '993. In spite of the incomplete rejection, Applicants will again endeavor, as above, to identify examples of dependent claim limitations that are not suggested by the patents relied upon.

For example, the rejection fails to set forth a teaching of a static mixer as recited in claim 8. Applicants are unable to find the term "static mixer" in Engelhard. Applicants respectfully request that the Examiner identify where the claimed limitations are set forth and which patent is relied upon as the basis for the teaching.

As to claim 14, Applicants urge that the rejection fails to set forth any teaching of the use of the liquid source providing pressure to circulate and output the ozonated liquid. Recently amended claim 16 recites a waste line, where liquid that is not output for use from the pressurized liquid circulation passageway is directed to the waste line. No such limitation has been identified in the teachings of Engelhard or Burris '993. Claim 17 further recites the limitation that the ozonated liquid rinses a cuspidor before entering the waste line of claim 16. Here again, the limitations of these dependent claims have not been set forth in the rejections and the finality of the present Office Action is urged to be, at a minimum, premature.

Relative to claim 19, the claim further recites an ozone sensor connected to an alarm. Once again, Applicants do not believe the rejection has identified where such a limitation is taught by Engelhard. Absent such teaching *prima facie* obviousness has not been established. Accordingly, Applicants respectfully maintain that the rejection of claim 19 over Engelhard in view of Burris '993 is incomplete and that the finality of the Office Action is premature.

Considering claim 23, again Applicants respectfully contend that the rejection fails to set forth a teaching of the use of operatory unit dried air as the source of oxygen for the ozone generator. Absent such teaching claim 23 is patentably distinguishable over the arguable combination and Applicants respectfully request that a subsequent action indicate the Allowability of claim 23.

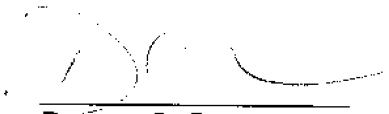
With respect to claim 25, a control system responsive to a lack of supply water is not believed to be taught by either patent relied upon for the rejection. Absent the identification of the teaching relied upon *prima facie* obviousness has not been established so as to permit Applicants an opportunity to respond. Hence, the rejection of claim 25 is, at best, incomplete and Applicants respectfully request a subsequent indication of the allowability of claim 25.

Applicants respectfully urge that in view of the incomplete rejections, in the event such rejections are maintained, Applicants must be permitted an opportunity to further amend or respond to the specific rejections.

In view of the foregoing remarks and amendments, reconsideration of this application and allowance thereof are earnestly solicited. In the event that additional fees are required as a result of this response, including fees for extensions of time, such fees should be charged to USPTO Deposit Account No. 50-2737 for Basch & Nickerson LLP.

In the event the Examiner considers personal contact advantageous to the timely disposition of this case, the Examiner is hereby authorized to call Applicant's attorney, Duane C. Basch, at Telephone Number (585) 899-3970, Penfield, New York.

Respectfully submitted,



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